

ABSTRACT OF THE DISCLOSURE

A system and method for winding fibers onto an article is disclosed. The system includes a winding station having a controllable speed of rotation. The winding station has at least one fiber bobbin mounted on it. A rotation sensor is rotationally coupled to the winding station. The system includes a conveyor having a controllable speed and which is adapted to move the article axially through the winding station. A speed sensor, adapted to measure an axial speed of motion of the article through the winding station is positioned near the winding station. The system includes a controller adapted to operate the winding station at a rotational speed corresponding to the axial speed of motion, so as to apply the fibers to the article in a predetermined helical pattern. In one example, the helical pattern is held to a lay angle having a tolerance within one-half degree. In the method, the rotational speed of the winding station is adjusted to correspond to the axial motion of the article so that the fibers are wound in a predetermined helical pattern. In one example of the method, the lay angle of the fibers is held to within a tolerance of about one half degree. In another example, the lay angle is selected to correspond to the axial position of the article within the winding station.

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